

#2 OIPE
8/1/01RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/765,272DATE: 07/30/2001
TIME: 12:02:09Input Set : N:\Crf3\RULE60\09765272.txt
Output Set: N:\CRF3\07302001\I765272.raw

SEQUENCE LISTING

1 (1) GENERAL INFORMATION:
 5 (i) APPLICANT: Choi et. al.
 9 (iii) TITLE OF INVENTION: Streptococcus pneumoniae Antigens and Vaccines
 13 (iii) NUMBER OF SEQUENCES: 452
 17 (iv) CORRESPONDENCE ADDRESS:
 19 (A) ADDRESSEE: Human Genome Sciences, Inc.
 21 (B) STREET: 9410 Key West Avenue
 23 (C) CITY: Rockville
 25 (D) STATE: Maryland
 27 (E) COUNTRY: USA
 29 (F) ZIP: 20850
 33 (v) COMPUTER READABLE FORM:
 35 (A) MEDIUM TYPE: Diskette, 3.50 inch, 1.4Mb storage
 37 (B) COMPUTER: HP Vectra 486/33
 39 (C) OPERATING SYSTEM: MSDOS version 6.2
 41 (D) SOFTWARE: ASCII Text
 45 (vi) CURRENT APPLICATION DATA:
 C--> 47 (A) APPLICATION NUMBER: US/09/765,272
 C--> 49 (B) FILING DATE: 22-Jan-2001
 51 (C) CLASSIFICATION:
 55 (vii) PRIOR APPLICATION DATA:
 57 (A) APPLICATION NUMBER: 08/961,083
 59 (B) FILING DATE:
 63 (viii) ATTORNEY/AGENT INFORMATION:
 65 (A) NAME: Brookes, A. Anders
 67 (B) REGISTRATION NUMBER: 36,373
 69 (C) REFERENCE/DOCKET NUMBER: PB340P2
 C--> 73 (ix) TELECOMMUNICATION INFORMATION:
 75 (A) TELEPHONE: (301) 309-8504
 77 (B) TELEFAX: (301) 309-8512
 85 (2) INFORMATION FOR SEQ ID NO: 1:
 87 (i) SEQUENCE CHARACTERISTICS:
 88 (A) LENGTH: 1999 base pairs
 89 (B) TYPE: nucleic acid
 90 (C) STRANDEDNESS: double
 91 (D) TOPOLOGY: linear
 95 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
 97 TAAAATCTAC GACAATAAAA ATCAACTCAT TGCTGACTTG GGTTCTGAAC GCCGCGTCAA 60
 99 TGCCCAAGCT AATGATATTG CCACAGATT GGTTAAGGCA ATCGTTCTA TCGAAGACCA 120
 101 TCGCTTCTTC GACCACAGGG GGATTGATAC CATCCGTATC CTGGGAGCTT TCTTGCACAA 180
 103 TCTGCAAAGC AATTCCCTCC AAGGTGGATC AACTCTCACC CAACAGTTGA TTAAGTTGAC 240
 105 TTACTTTCA ACTTCGACTT CCGACCAGAC TATTCTCGT AAGGCTCAGG AAGCTTGGTT 300
 107 AGCGATTCAAG TTAGAACAAA AAGCAACCAA GCAAGAAATC TTGACCTACT ATATAAATAA 360
 109 GGTCTACATG TCTAATGGGA ACTATGGAAT GCAGACAGCA GCTAAAATC ACTATGGTAA 420
 111 AGACCTCAAT AATTAAAGTT TACCTCAGTT AGCCTTGCTG GCTGGAATGC CTCAGGCACC 480
 113 AAACCAATAT GACCCCTATT CACATCCAGA AGCAGCCCAA GACCGCCGAA ACTTGGTCTT 540

ENTERED

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115	ATCTGAAATG	AAAAATCAAG	GCTACATCTC	TGCTGAACAG	TATGAGAAAG	CAGTCAATAC	600
117	ACCAATTACT	GATGGACTAC	AAAGTCTCAA	ATCAGCAAGT	AATTACCCCTG	CTTACATGGA	660
119	TAATTACCTC	AAGGAAGTCA	TCAATCAAGT	TGAAGAAAGAA	ACAGGCTATA	ACCTACTCAC	720
121	AACTGGGATG	GATGTCTACA	CAAATGTAGA	CCAAGAAAGCT	CAAAAACATC	TGTTGGGATAT	780
123	TTACAATACA	GACGAATACG	TTGCCTATCC	AGACGATGAA	TTGCAAGTCG	CTTCTACCAT	840
125	TGTTGATGTT	TCTAACGGTA	AAGTCATTGC	CCAGCTAGGA	GCACGCCATC	AGTCAAGTAA	900
127	TGTTTCCTTC	GGAAATTAACC	AAGCAGTACA	AACAAACCAGC	GACTGGGGAT	CAACTATGAA	960
129	ACCGATCACA	GACTATGCTC	CTGCCTTGG	GTACGGTGT	TACGATTCAA	CTGCTACTAT	1020
131	CGTTCACGAT	GAGCCTATA	ACTACCCTGG	GACAAATACT	CCTGTTATA	ACTGGGATAG	1080
133	GGGCTACTTT	GGCAACATCA	CCTTGCATA	CGCCCTGCAA	CAATCGCGAA	ACGTCCCAGC	1140
135	CGTGGAAACT	CTAAACAAAGG	TCGGACTCAA	CCGCGCCAAG	ACTTTCTAA	ATGGTCTAGG	1200
137	ATCGACTAC	CCAAGTATTTC	ACTACTCAA	TGCCATTCA	AGTAACACAA	CCGAATCAGA	1260
139	CAAAAAATAT	GGAGCAAGTA	GTGAAAAGAT	GGCTGCTGCT	TACGCTGCCT	TTGCAAATGG	1320
141	TGGAACCTAC	TATAAACCAA	TGTATATCCA	TAAAGTCGTC	TTTAGTGATG	GGAGTGAAA	1380
143	AGAGTTCTCT	AATGTCGGAA	CTCGTGCCT	GAAGGAAACG	ACAGCCTATA	TGATGACCGA	1440
145	CATGATGAAA	ACAGTCTTGA	CTTATGGAAC	TGGACGAAAT	GCCTATCTTG	CTTGGCTCCC	1500
147	TCAGGCTGGT	AAAACAGGAA	CCTCTAACTA	TACAGACGAG	GAAATTGAAA	ACCACATCAA	1560
149	GACCTCTCAA	TTTGTAGCAC	CTGATGAAC	ATTGCTGGC	TATACGCGTA	AATATTCAAT	1620
151	GGCTGTATGG	ACAGGCTATT	CTAACCGTCT	GACACCACTT	GTAGGCAATG	GCCTTACGGT	1680
153	CGCTGCCAAA	GTTCACCGCT	CTATGATGAC	CTACCTGTCT	GAAGGAAAGCA	ATCCAGAAGA	1740
155	TTGGAATATA	CCAGAGGGC	TCTACAGAAA	TGGAGAATTG	GTATTTAAAA	ATGGTGCTCG	1800
157	TTCTACGTGG	AACTCACCTG	CTCCACAAAC	ACCCCCATCA	ACTGAAAGTT	CAAGCTCATC	1860
159	ATCAGATAGT	TCAACTTCAC	AGTCTAGCTC	AACCACCTCA	AGCACAATA	ATAGTACGAC	1920
161	TACCAATCCT	AAACAATAATA	CGCAACAATC	AAATACAACC	CCTGATCAAC	AAAATCAGAA	1980
163	TCCTCAACCA	GCACAAACCA					1999

165 (2) INFORMATION FOR SEQ ID NO: 2:

167 (i) SEQUENCE CHARACTERISTICS:

168	(A) LENGTH: 666 amino acids
169	(B) TYPE: amino acid
170	(C) STRANDEDNESS: single
171	(D) TOPOLOGY: linear

173 (ii) MOLECULE TYPE: protein

178 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

180	Lys	Ile	Tyr	Asp	Asn	Lys	Asn	Gln	Leu	Ile	Ala	Asp	Leu	Gly	Ser	Glu
181	1					5			10					15		
183	Arg	Arg	Val	Asn	Ala	Gln	Ala	Asn	Asp	Ile	Pro	Thr	Asp	Leu	Val	Lys
184						20			25					30		
186	Ala	Ile	Val	Ser	Ile	Glu	Asp	His	Arg	Phe	Phe	Asp	His	Arg	Gly	Ile
187						35			40					45		
189	Asp	Thr	Ile	Arg	Ile	Leu	Gly	Ala	Phe	Leu	Arg	Asn	Leu	Gln	Ser	Asn
190						50			55					60		
192	Ser	Leu	Gln	Gly	Gly	Ser	Thr	Leu	Thr	Gln	Gln	Leu	Ile	Lys	Leu	Thr
193						65			70					75		80
195	Tyr	Phe	Ser	Thr	Ser	Thr	Ser	Asp	Gln	Thr	Ile	Ser	Arg	Lys	Ala	Gln
196									85					90		95
198	Glu	Ala	Trp	Leu	Ala	Ile	Gln	Leu	Glu	Gln	Lys	Ala	Thr	Lys	Gln	Glu
199									100					105		110
201	Ile	Leu	Thr	Tyr	Tyr	Ile	Asn	Lys	Val	Tyr	Met	Ser	Asn	Gly	Asn	Tyr
202									115					120		125

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204 Gly Met Gln Thr Ala Ala Gln Asn Tyr Tyr Gly Lys Asp Leu Asn Asn
 205 130 135 140
 207 Leu Ser Leu Pro Gln Leu Ala Leu Ala Gly Met Pro Gln Ala Pro
 208 145 150 155 160
 210 Asn Gln Tyr Asp Pro Tyr Ser His Pro Glu Ala Ala Gln Asp Arg Arg
 211 165 170 175
 213 Asn Leu Val Leu Ser Glu Met Lys Asn Gln Gly Tyr Ile Ser Ala Glu
 214 180 185 190
 216 Gln Tyr Glu Lys Ala Val Asn Thr Pro Ile Thr Asp Gly Leu Gln Ser
 217 195 200 205
 219 Leu Lys Ser Ala Ser Asn Tyr Pro Ala Tyr Met Asp Asn Tyr Leu Lys
 220 210 215 220
 222 Glu Val Ile Asn Gln Val Glu Glu Glu Thr Gly Tyr Asn Leu Leu Thr
 223 225 230 235 240
 225 Thr Gly Met Asp Val Tyr Thr Asn Val Asp Gln Glu Ala Gln Lys His
 226 245 250 255
 228 Leu Trp Asp Ile Tyr Asn Thr Asp Glu Tyr Val Ala Tyr Pro Asp Asp
 229 260 265 270
 231 Glu Leu Gln Val Ala Ser Thr Ile Val Asp Val Ser Asn Gly Lys Val
 232 275 280 285
 234 Ile Ala Gln Leu Gly Ala Arg His Gln Ser Ser Asn Val Ser Phe Gly
 235 290 295 300
 237 Ile Asn Gln Ala Val Glu Thr Asn Arg Asp Trp Gly Ser Thr Met Lys
 238 305 310 315 320
 240 Pro Ile Thr Asp Tyr Ala Pro Ala Leu Glu Tyr Gly Val Tyr Asp Ser
 241 325 330 335
 243 Thr Ala Thr Ile Val His Asp Glu Pro Tyr Asn Tyr Pro Gly Thr Asn
 244 340 345 350
 246 Thr Pro Val Tyr Asn Trp Asp Arg Gly Tyr Phe Gly Asn Ile Thr Leu
 247 355 360 365
 249 Gln Tyr Ala Leu Gln Gln Ser Arg Asn Val Pro Ala Val Glu Thr Leu
 250 370 375 380
 252 Asn Lys Val Gly Leu Asn Arg Ala Lys Thr Phe Leu Asn Gly Leu Gly
 253 385 390 395 400
 255 Ile Asp Tyr Pro Ser Ile His Tyr Ser Asn Ala Ile Ser Ser Asn Thr
 256 405 410 415
 258 Thr Glu Ser Asp Lys Lys Tyr Gly Ala Ser Ser Glu Lys Met Ala Ala
 259 420 425 430
 261 Ala Tyr Ala Ala Phe Ala Asn Gly Gly Thr Tyr Tyr Lys Pro Met Tyr
 262 435 440 445
 264 Ile His Lys Val Val Phe Ser Asp Gly Ser Glu Lys Glu Phe Ser Asn
 265 450 455 460
 267 Val Gly Thr Arg Ala Met Lys Glu Thr Thr Ala Tyr Met Met Thr Asp
 268 465 470 475 480
 270 Met Met Lys Thr Val Leu Thr Tyr Gly Thr Gly Arg Asn Ala Tyr Leu
 271 485 490 495
 273 Ala Trp Leu Pro Gln Ala Gly Lys Thr Gly Thr Ser Asn Tyr Thr Asp
 274 500 505 510
 276 Glu Glu Ile Glu Asn His Ile Lys Thr Ser Gln Phe Val Ala Pro Asp

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277	515	520	525													
279	Glu	Leu	Phe	Ala	Gly	Tyr	Thr	Arg	Lys	Tyr	Ser	Met	Ala	Val	Trp	Thr
280	530															540
282	Gly	Tyr	Ser	Asn	Arg	Leu	Thr	Pro	Leu	Val	Gly	Asn	Gly	Leu	Thr	Val
283	545															560
285	Ala	Ala	Lys	Val	Tyr	Arg	Ser	Met	Met	Thr	Tyr	Leu	Ser	Glu	Gly	Ser
286	565															575
288	Asn	Pro	Glu	Asp	Trp	Asn	Ile	Pro	Glu	Gly	Leu	Tyr	Arg	Asn	Gly	Glu
289	580															590
291	Phe	Val	Phe	Lys	Asn	Gly	Ala	Arg	Ser	Thr	Trp	Asn	Ser	Pro	Ala	Pro
292	595															605
294	Gln	Gln	Pro	Pro	Ser	Thr	Glu	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Ser	Ser
295	610															620
297	Thr	Ser	Gln	Ser	Ser	Ser	Thr	Thr	Pro	Ser	Thr	Asn	Asn	Ser	Thr	Thr
298	625															640
300	Thr	Asn	Pro	Asn	Asn	Asn	Thr	Gln	Gln	Ser	Asn	Thr	Thr	Pro	Asp	Gln
301	645															655
303	Gln	Asn	Gln	Asn	Pro	Gln	Pro	Ala	Gln	Pro						
304	660															665

306 (2) INFORMATION FOR SEQ ID NO: 3:

308 (i) SEQUENCE CHARACTERISTICS:

- 309 (A) LENGTH: 1714 base pairs
- 310 (B) TYPE: nucleic acid
- 311 (C) STRANDEDNESS: double
- 312 (D) TOPOLOGY: linear

316 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

318	AAATTACAAT	ACGGACTATG	AATTGACCTC	TGGAGAAAAA	TTACCTCTTC	CTAAAGAGAT	60
320	TTCAGGTTAC	ACTTATATTG	GATATATCAA	AGAGGGAAAA	ACGACTTCTG	AGTCTGAAGT	120
322	AAGTAATCAA	AAGAGTTCAAG	TTGCCACTCC	TACAAAACAA	CAAAAGGTGG	ATTATAATGT	180
324	TACACCGAAT	TTTGTAGACC	ATCCATCAAC	AGTACAAGCT	ATTAGGAAC	AAACACCTGT	240
326	TTCTTCAACT	AAGCCGACAG	AAGTTCAAGT	AGTTGAAAAA	CCTTTCTCTA	CTGAATTAAT	300
328	CAATCCAAGA	AAAGAAAGAGA	AACAATCTTC	AGATTCTCAA	GAACAATTAG	CCGAACATAA	360
330	GAATCTAGAA	ACGAAGAAAG	AGGAGAAGAT	TTCTCCAAA	GAAAAGACTG	GGGTAAATAC	420
332	ATTAAATCCA	CAGGATGAAG	TTTTATCAGG	TCAATTGAAC	AAACCTGAAC	TCTTATATCG	480
334	TGAGGAAACT	ATGGAGACAA	AAATAGATT	TCAAGAAGAA	ATTCAAGAAA	ATCCTGATTT	540
336	AGCTGAAGGA	ACTGTAAGAG	TAAAACAAGA	AGGTAATTA	GGTAAGAAAG	TTGAAATCGT	600
338	CAGAATATT	TCTGTAAACA	AGGAAGAAGT	TTCGCGAGAA	ATTGTTCAA	CTTCAACGAC	660
340	TGCGCCTAGT	CCAAGAATAG	TCGAAAAAGG	TACTAAAAAA	ACTCAAGTTA	TAAAGGAACA	720
342	ACCTGAGACT	GGTGTAGAAC	ATAAGGACGT	ACAGTCTGGA	GCTATTGTTG	AACCCGCAAT	780
344	TCAGCCTGAG	TTGCCCGAAG	CTGTAGTAAG	TGACAAAGGC	GAACCAGAAG	TTCAACCTAC	840
346	ATTACCGAA	GCAGTTGTGA	CCGACAAAGG	TGAGACTGAG	GTTCAACCAG	AGTCGCCAGA	900
348	TACTGTGGTA	AGTGATAAAG	GTGAACCAGA	GCAGGTAGCA	CCGCTTCCAG	AATATAAGGG	960
350	TAATATTGAG	CAAGTAAAAC	CTGAAACTCC	GGTGAGAAG	ACCAAAGAAC	AAGGTCCAGA	1020
352	AAAAACTGAA	GAAGTTCCAG	TAAAACCAAC	AGAAGAAACA	CCAGTAAATC	CAAATGAAGG	1080
354	TACTACAGAA	GGAACCTCAA	TTCAAGAACG	AGAAAATCCA	GTTCAACCTG	CAGAAGAATC	1140
356	AACAAACGAAT	TCAGAGAAAG	TATCACCAGA	TACATCTAGC	AAAAATACTG	GGGAAGTGTC	1200
358	CAGTAATCCT	AGTGATTGCA	CAACCTCAGT	TGGAGAATCA	AATAAACCGAG	AACATAATGA	1260
360	CTCTAAAAAT	GAAAATTCAAG	AAAAAACTGT	AGAAGAAGTT	CCAGTAAATC	CAAATGAAGG	1320
362	CACAGTAGAA	GGTACCTCAA	ATCAAGAAC	AGAAAAACCA	GTTCAACCTG	CAGAAGAAC	1380

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364 ACAAACAAAC TCTGGGAAAA TAGCTAACGA AAATACTGGA GAAGTATCCA ATAAACCTAG 1440
 366 TGATTCAAAA CCACCAAGTTG AAGAATCAAA TCAACCAGAA AAAAACGGAA CTGCAACAAA 1500
 368 ACCAGAAAAT TCAGGTAATA CAACATCAGA GAATGGACAA ACAGAACCCAG AACCATCAAA 1560
 370 CGGAAATTCA ACTGAGGATG TTTCAACCGA ATCAAACACA TCCAATTCAA ATGGAAACGA 1620
 372 AGAAATTAAA CAAGAAAATG AACTAGACCC TGATAAAAAG GTAGAAGAAC CAGAGAAAAC 1680
 374 ACTTGAATTA AGAAATGTTT CCGACCTAGA GTTA 1714
 376 (2) INFORMATION FOR SEQ ID NO: 4:
 378 (i) SEQUENCE CHARACTERISTICS:
 379 (A) LENGTH: 571 amino acids
 380 (B) TYPE: amino acid
 381 (C) STRANDEDNESS: single
 382 (D) TOPOLOGY: linear
 384 (ii) MOLECULE TYPE: protein
 389 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 391 Asn Tyr Asn Thr Asp Tyr Glu Leu Thr Ser Gly Glu Lys Leu Pro Leu
 392 1 5 10 15
 394 Pro Lys Glu Ile Ser Gly Tyr Thr Tyr Ile Gly Tyr Ile Lys Glu Gly
 395 20 25 30
 397 Lys Thr Thr Ser Glu Ser Glu Val Ser Asn Gln Lys Ser Ser Val Ala
 398 35 40 45
 400 Thr Pro Thr Lys Gln Gln Lys Val Asp Tyr Asn Val Thr Pro Asn Phe
 401 50 55 60
 403 Val Asp His Pro Ser Thr Val Gln Ala Ile Gln Glu Gln Thr Pro Val
 404 65 70 75 80
 406 Ser Ser Thr Lys Pro Thr Glu Val Gln Val Val Glu Lys Pro Phe Ser
 407 85 90 95
 409 Thr Glu Leu Ile Asn Pro Arg Lys Glu Glu Lys Gln Ser Ser Asp Ser
 410 100 105 110
 412 Gln Glu Gln Leu Ala Glu His Lys Asn Leu Glu Thr Lys Lys Glu Glu
 413 115 120 125
 415 Lys Ile Ser Pro Lys Glu Lys Thr Gly Val Asn Thr Leu Asn Pro Gln
 416 130 135 140
 418 Asp Glu Val Leu Ser Gly Gln Leu Asn Lys Pro Glu Leu Leu Tyr Arg
 419 145 150 155 160
 421 Glu Glu Thr Met Glu Thr Lys Ile Asp Phe Gln Glu Ile Gln Glu
 422 165 170 175
 424 Asn Pro Asp Leu Ala Glu Gly Thr Val Arg Val Lys Gln Glu Gly Lys
 425 180 185 190
 427 Leu Gly Lys Lys Val Glu Ile Val Arg Ile Phe Ser Val Asn Lys Glu
 428 195 200 205
 430 Glu Val Ser Arg Glu Ile Val Ser Thr Ser Thr Ala Pro Ser Pro
 431 210 215 220
 433 Arg Ile Val Glu Lys Gly Thr Lys Lys Thr Gln Val Ile Lys Glu Gln
 434 225 230 235 240
 436 Pro Glu Thr Gly Val Glu His Lys Asp Val Gln Ser Gly Ala Ile Val
 437 245 250 255
 439 Glu Pro Ala Ile Gln Pro Glu Leu Pro Glu Ala Val Val Ser Asp Lys
 440 260 265 270
 442 Gly Glu Pro Glu Val Gln Pro Thr Leu Pro Glu Ala Val Val Thr Asp

VERIFICATION SUMMARY

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DATE: 07/30/2001

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Input Set : N:\Crf3\RULE60\09765272.txt
Output Set: N:\CRF3\07302001\I765272.raw

L:47 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:49 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:73 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]
L:853 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:2649 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=41
L:2885 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=45
L:2927 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:2984 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=47
L:3320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:3641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56
L:3825 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:3828 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:4317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:4395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:4966 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74
L:5102 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=75
L:5172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76
L:5365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80
L:5398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80
L:5533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
L:7004 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:7007 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:7019 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:7034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:7075 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=107
L:7616 M:111 C: (47) String data converted to upper case,
L:7764 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118
L:7944 M:111 C: (47) String data converted to upper case,
L:8040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120
L:10220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:160
L:10343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:162
L:10809 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:172
L:10812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:172
L:10815 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:172
L:11039 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176
L:11932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:194
L:14181 M:111 C: (47) String data converted to upper case,
L:17498 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:452